

REMARKS

Reconsideration of the above-identified application in view of the foregoing amendments and following remarks is respectfully requested.

A. Status of the Claims and Explanation of Amendments

Claims 1-19 were pending.

By this paper, claims 1, 8, 11, 14-16 are amended, and claims 3, 9, 12 and 17 are cancelled without prejudice or disclaimer.

Claim 8 is amended to delete “the light beam having an angle of divergence” and amended to recite “the light beam emitted from the first light-emitting unit having an angle of divergence and the light beam emitted from the second light-emitting unit having an angle of divergence.” Claim 14 is similarly amended. Support for these amendments may be found throughout the specification as originally filed, including for example at numbered paragraphs 0030-33 and Fig. 2.

Claim 11 is amended to delete “the light beam having a cross section of generally elliptical shape” and to recite “the light beam emitted from the first light-emitting unit having a cross section of generally elliptical shape and the light beam emitted from the second light-emitting unit having a cross section of generally elliptical shape.” Claim 15 is similarly amended. Support for these amendments may be found throughout the specification as originally filed, including for example numbered paragraph 0031 and Fig. 2.

These amendments are not made for any substantial reasons related to patentability (§§102, 103).

Claim 1 is amended to delete “partially” and amended to recite “in the shorter diameter direction of the irradiation pattern of the light beam from the one light-emitting unit.”

Claim 8 is amended to recite “having a cross section of generally elliptical shape” and “in a shorter diameter direction of generally elliptical shape.” Claim 14 is similarly amended. Claim 11 is amended to recite “generally 90 degrees.” Claim 15 is similarly amended. Claim 16 is amended to delete “and” and amended to recite “of an elliptical shape,” “, a third light-emitting unit and a fourth light-emitting unit,” and “, and the third light-emitting unit having an optical axis inclined with respect to an optical axis of the fourth light-emitting unit such that the optical axes are separated from each other in the shorter side direction, and the shorter side directions of the light beams from the third and fourth light-emitting units are the same as or orthogonal to the shorter side directions of the light beams from the first and second light-emitting units.” Support for these amendments may be found throughout the specification as originally filed, including for example at numbered paragraphs 0030-0035, 0037-0042, 0044-0048 and Figs. 2-4.

No new matter will be added to this application by entry of these amendments to the claims.

As to matters of form, the September 21, 2006, Office Action rejected claims 8, 11 and 14-15 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. [9/21/2006 Office Action at p. 2]. The office action alleged that claims 8, 11 and 14-15 were unclear as to which light beam was being referred to in those claims as originally submitted. [9/21/2006 Office Action at p. 2]. The amendments set forth above are believed to render moot this rejection. Pending claims 8, 11 and 14-15 are believed to define with reasonable clarity the patentable subject matter and would readily be understood by a person of ordinary skill in the art. Applicant respectfully requests withdrawal of the rejection of the claims under § 112, second paragraph.

As to the merits, claims 1-19 were found to be novel over the prior art. However, the pending office action rejected these claims under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,777,768 to Korevaar ("Korevaar"). [9/21/2006 Office Action at p. 3].¹ The rejections of claims 3, 9, 12 and 17 are respectfully asserted to be moot in light of their cancellation.

B. Claims 1-2, 4-8, 10-11, 13-16 and 18-19 are Patentably Distinct from Korevaar

The rejections of claims 1-2, 4-8, 10-11, 13-16 and 18-19 are respectfully traversed. As explained more fully below, the requirements for such rejections are not met because the cited reference does not teach, disclose or suggest a free space optics communication apparatus as recited in these claims, and the office action has not provided a proper basis for remedying these admitted deficiencies via the theory of optimization.

Korevaar is directed to a free space communication system, which includes a first and second terminal each containing a plurality of laser transmitters. [Korevaar, Abstract]. The laser transmitters are pointed by respective steering assemblies and mounted on a support member. [Korevaar, Col 5, lines 21-24]. The laser transmitters generate several laser beams; each laser beam carrying a communication signal. [Korevaar, Abstract]. The laser beam forms a generally elliptical irradiation pattern on the second terminal. [Korevaar, Col 8, lines 7-8]. The laser transmitters are pointed in a substantially parallel path, and due to divergence in each of the transmitted beams, they will, at least to some extent, overlap one another in the far field. [Korevaar, Col 3, lines 40-45]. The laser transmitters are pointed by steering assemblies.

¹ In the summary section of the office action, claim 19 is not specifically addressed. During a recent telephone interview, the Examiner indicated that claim 19 has been rejected and its claim elements are addressed in the office action in connection with the discussion of claim 18. This response is made in accordance with this teleconference.

[Korevaar, Col 5, lines 22-23]. The steering assemblies can be either independent gimbals which are useful for steering the laser transmitters in separately, or there can be a single steering assembly which has a single gimbal for collectively holding and steering all of the multiple laser transmitters. [Korevaar, Col 5, lines 32-37].

1. **Claims 1-2 and 4-7 are Patentably Distinct from Korevaar**

Applicant's claim 1 recites:

"1. A free space optics communication apparatus which performs communication with another apparatus with light beams, comprising:

a plurality of light-emitting units, each of the units emitting a light beam which forms a generally elliptical irradiation pattern on the other apparatus,

wherein the plurality of light-emitting units are set such that irradiation patterns of light beams from at least two of the plurality of light-emitting units overlap in the shorter diameter direction of the irradiation pattern of the light beam from the one light-emitting unit at a light-receiving unit of the other apparatus, and a width of a combined irradiation pattern formed by combining the light beams from the plurality of light-emitting units in a shorter diameter direction of an irradiation pattern of a light beam from one of the plurality of light-emitting units is 1.5 times or more larger than a width in the shorter diameter direction of the irradiation pattern of the light beam from the one light-emitting unit."

The office action concedes that Korevaar does not expressly disclose the width ratio of the combined overlapping beams. [See 9/21/2006 Office Action at p. 3 ("Although not expressly disclosing the claimed width ratio of the combined overlapping beams....")].

However, the office action asserts that it would have been obvious to have the amount of overlap (width ratio) of the combined transmitted light beams to achieve "the stated goal of controlled and predictable overlap of laser beams which reduce signal fluctuations in the receiver."

[9/21/2006 Office Action at p. 4].

To support this rejection, the office action relies on text in Korevaar at column 6, lines 16-22, and column 9, lines 29-36. [9/21/2006 Office Action at p. 3-4]. Applicant's review of the text finds that, at best, it discloses a free space optics communication system with laser beams that overlap in the far field:

“Further, it is important that all of the laser beams 20 emanating from separate spatial locations in terminal 12 overlap in the far field 30 to achieve a reduction in signal fluctuations at the receiver 34 in terminal 14. Thus, the required power of each laser transmitter 26a-c is reduced by far more than would be expected from just summing the laser output powers.” [Korevaar, Col 6, lines 16-22].

* * *

“In the above disclosure, there has been mention of the divergence of the laser beams 20 as the emanate from terminal 12, 14. The importance of this divergence, of course, based on the intention of the system 10 that all of the laser beams 20 overlap in the far field. This divergence and overlap, however can not be haphazard. For the present invention, these characteristics of the laser beams 20 must be somehow controlled and, therefore, made predictable.” [Korevaar, Col 9, lines 31-36].

* * *

“Also important, however, is the fact that the diffuser 104 establishes a divergence for the individual beams 20, 20b, 20c' and 20c'' which will cause them to overlap in the far field.” [Korevaar, Co 10, lines 4-6].

In the above referenced text, Korevaar does not mention any direction of overlap (i.e., the shorter diameter direction or the longer diameter direction) of laser beams. Moreover, Korevaar does not suggest that the direction of the overlap is even relevant to any result, including the reduction of signal fluctuation.

Despite the silence of Korevaar with respect to the direction of overlap of laser beams, the office action asserts that it would be obvious have a plurality of laser beams overlap in the shorter diameter direction. [9/21/2006 Office Action at p. 4]. However, the office action does not give any support for such an assertion.

To optimize a variable, it is necessary to appreciate that the variable is result effective. [9/21/2006 Office Action at p. 5 (“Only Result-Effective Variables Can Be Optimized)"]. Because Korevaar does not teach, disclose or suggest that the direction of overlap is result effective, it cannot be obvious to optimize that variable. Therefore, Korevaar does not teach, disclose or suggest “at least two of the plurality of light-emitting units overlap in the shorter diameter direction of the irradiation pattern of the light beam from the one light-emitting unit at a light-receiving unit of the other apparatus” as recited in Applicant’s claim 1.

Accordingly, at least independent claim 1 and its dependent claims 2 and 4-7 are respectfully asserted to be in condition for allowance. Applicant respectfully requests reconsideration and withdrawal of the rejections under Section 103(a).

2. **Claims 8, 10 and 14 are Patentably Distinct from Korevaar**

Applicant’s claim 8 recites:

“8. A transmission apparatus which transmits information to a reception apparatus through light beams comprising:

a first light-emitting unit and a second light-emitting unit each emitting a light beam having a cross section of generally elliptical shape, the light beam emitted from the first light-emitting unit having an angle of divergence and the light beam emitted from the second light-emitting unit having an angle of divergence;

wherein a first direction in which the light beam emitted from the first light-emitting unit is inclined by an angle smaller than the angle of divergence in a shorter diameter direction of generally elliptical shape with respect to a second direction in which the light

beam emitted from the second light-emitting unit.”

The office action concedes that there is no express disclosure that the first light-emitting unit is inclined by an angle smaller than the angle of divergence. [See 9/21/2006 Office Action at p. 7 (“Although not expressly disclosing the claimed incline of the transmitter(s) by an angle smaller than the angle of divergence....”).]. However, the office action takes the view that it would have been obvious to arrange the transmitters in this manner “in order to arrive at the stated goal of overlapping the laser beams in order to reduce the signal fluctuations in the receiver.” [9/21/2006 Office Action at p. 8].

As support for this rejection, the office action cites Korevaar at column 5, lines 22-30 and 32-34. [9/21/2006 Office Action at pp. 7-8]. The cited text is a portion of Korevaar’s specification. Applicant’s review of the cited text finds that, at best, it discloses that the laser transmitters are pointed by steering assemblies in an overlapping manner:

“These laser transmitters 26a-c are pointed by respective steering assemblies 28a, 28b and 28c, also mounted on support member 27a, so that the respective emanating laser beams 20a, 20 and 20c are all pointed approximately in the same direction. For purpose of the present invention the laser beams 20 are pointed along substantially parallel paths, recognizing that in a far field 30 they will, at least to some extent, overlap one another... The respective steering assemblies 28a-c can be either independent gimbals which are useful for steering the lasers transmitters 26a-c separately,...” [Korevaar, Col 5, lines 22-34].

More specifically, Korevaar discloses that the angle of divergence of the laser beams as they emanate from the transmitters corresponds to the amount of their overlap at the receiver:

“A divergence for the individually transmitted laser beams...is established by [a] diffuser.... The divergence angle 112 for [the beams]...as they emanate from the terminals 12, 14 will be around

one milliradian. For most applications this divergence angle 112 will ensure overlap in the far field. It is to be appreciated, however, that divergence can be controlled by simply constituting diffuser 104 with appropriately selected microspheres 110 and the proper emersion fluid.” [Korevaar, Col 10, lines 8-53].

In this passage, Korevaar teaches that the divergence of the beams 20a, 20b, 20c’ and 20c” is about one degree. [Korevaar, Col 10, lines 23-26].

At most, Korevaar teaches that some degree of overlap of the laser beams 20 is desirable. Korevaar is utterly silent as to whether this overlap should be in a shorter diameter direction or in a longer diameter direction. Korevaar also is silent as to whether the first light-emitting unit should be inclined by an angle smaller than the angle of divergence or should be inclined by an angle larger than the angle of divergence.

Nonetheless, the office action states it would have been obvious to optimize these features recited in Applicant’s claim 8 “to reduce signal fluctuations.” No specific support in Korevaar is cited in the office action to substantiate this view.

Applicant’s review of Korevaar finds that its disclosures regarding reduction in signal fluctuations are much more limited. At best, Korevaar teaches that some degree of overlap is beneficial for reducing signal fluctuations:

“Further, it is important that all of the laser beams 20 which emanate from separate spatial locations in terminal 12 overlap in the far field 30 to achieve a reduction in signal fluctuations at the receiver 34 in terminal 14.” [Korevaar, Col. 6, lines 14-19].

As the office action concedes, to optimize a variable, it is necessary to appreciate that the variable is result effective. [9/21/2006 Office Action at p. 9 (“Only Result-Effective Variables Can Be Optimized”)]. Because Korevaar lacks any teaching, disclosure or suggestion that links the variables of (1) overlap in a shorter diameter direction and (2) inclination by an

angle smaller than the angle of divergence to any result (including reduction in signal fluctuation), it cannot be obvious to optimize these variables. Therefore, Korevaar does not teach, disclose, or suggest “the light beam emitted from the first light-emitting unit is inclined by an angle smaller than the angle of divergence in a shorter diameter direction of generally elliptical shape with respect to a second direction in which the light beam emitted from the second light-emitting unit” as recited in Applicant’s claim 8.

Accordingly, at least independent claim 8 and its dependent claim 10 are respectfully asserted to be in condition for allowance. For at least similar reasons, independent claim 14 also is asserted to be in condition for allowance. Applicant respectfully requests reconsideration and withdrawal of the rejections under Section 103(a).

3. **Claims 11, 13 and 15 are Patentably Distinct from Korevaar**

Applicant’s claim 11 recites:

“11. A transmission apparatus which transmits information to a reception apparatus through light beams, comprising:

a first light-emitting unit and a second light-emitting unit each emitting a light beam, the light beam emitted from the first light-emitting unit having a cross section of generally elliptical shape and the light beam emitted from the second light-emitting unit having a cross section of generally elliptical shape;

wherein said first shorter diameter direction of the generally elliptical shape of the cross section of the light beam from the first light-emitting unit is inclined generally 90 degrees with respect to a second shorter diameter of the generally elliptical shape of the cross section of the light beam from the second light emitting unit.”

The office action concedes that Korevaar does not disclose the incline of the first light-emitting unit is generally 90 degrees as recited in Applicant’s claim 11. [See 9/21/2006 Office Action at p. 7 (“Although not expressly disclosing the claimed incline of the transmitter(s)

by....”)]. However, the office action asserts that it would have been obvious to arrange the transmitters in this manner “to arrive at the stated goal of overlapping the laser beams in order to reduce signal fluctuations.” [9/21/2006 Office Action at p. 8].

To support this conclusion, the office action cites Korevaar at column 5, lines 22-30 and 32-34, and FIG. 4B. [9/21/2006 Office Action at pp. 7-8 & 10]. These sections of Korevaar are a portion of the specification and a drawing. The text cited by the office action is quoted and discussed *supra* at p. 13 in connection with claims 8, 10 and 14. This text does not mention (1) a shorter diameter direction and (2) an angle of inclination that is generally 90 degrees.

Likewise, the portion of Korevaar’s specification that corresponds to Figure 4B (reproduced below) does not mention (1) a shorter diameter direction or (2) an angle of inclination that is generally 90 degrees.

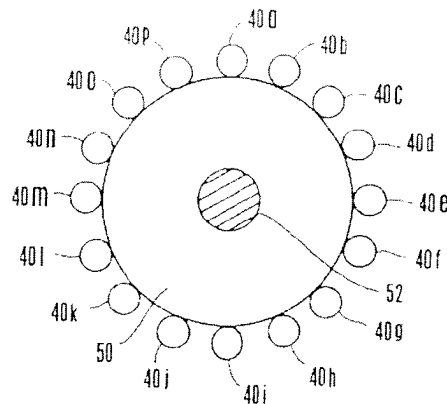


Fig. 4B

The office action does not state that Korevaar shows an inclination between two shorter diameter directions to be generally 90 degrees. Rather, it states that FIG. 4B shows an “inclination of transmitters...[controlled] by steering gimbals; thereby allowing for an inclination

between two shorter diameter directions to be generally 90 degrees.” [9/21/2006 Office Action at p. 10].

Applicant’s review of Korevaar finds that “FIG. 4B shows a front view of the relative orientation of the different transmit laser assemblies 40a-p arrayed around the receiving aperture 46 of telescope base 48 of receiver 34.” [Korevaar, Col 7, lines 1-3]. Korevaar also says arraying the laser transmitters around the aperture in the way shown in Figure 4B provides sufficient separation “to allow significant fluctuation reduction at the satellite.” [Korevaar, Col 7, lines 30-32]. Korevaar further discloses “the whole receiver/transmitter assembly of terminal 12 can be steered by a single gimbal apparatus.” [Korevaar, Col 7, lines 32-34]. Hence, Korevaar does not mention an inclination between two shorter diameter directions to be generally 90 degrees with regards to FIG. 4B.

Despite the lack of teaching, disclosure or suggestion in Korevaar for either (1) a shorter diameter direction or (2) an angle of inclination which is generally 90 degrees, the office action asserts that it would be obvious to optimize these features. [9/21/2006 Office Action at p. 8]. However, the office action offers no support for this claim.

As the office action concedes, to optimize a variable, it is necessary to appreciate that the variable is result effective. [9/21/2006 Office Action at p. 9 (“Only Result-Effective Variables Can Be Optimized”)]. Because Korevaar lacks any teaching, disclosure or suggestion that the first light-emitting unit being inclined generally 90 degrees with respect to a second shorter diameter has an effect on the result, it cannot be obvious to optimize these variables. Therefore, Korevaar does not teach, disclose, or suggest “the first shorter diameter direction of the generally elliptical shape of the cross section of the light beam from the first light-emitting unit is inclined generally 90 degrees with respect to a second shorter diameter of the generally

elliptical shape of the cross section of the light beam from the second light emitting unit” as recited in Applicant’s claim 11.

Accordingly, at least independent claim 11 and its dependent claim 13 are respectfully asserted to be in condition for allowance. For at least similar reasons, independent 15 also is asserted to be in condition for allowance. Applicant respectfully requests reconsideration and withdrawal of the rejections under Section 103(a).

4. **Claim 16 is Patentably Distinct from Korevaar**

Applicant’s claim 16 recites:

“16. An apparatus which transmits information by directing light beams from a free space, comprising:

a plurality of light-emitting units, each of the units having an optical axis and emitting a light beam which has a cross section of an elliptical shape having a shorter side direction, and the plurality of light-emitting units including a first light-emitting unit, a second light-emitting unit, a third light-emitting unit and a fourth light-emitting unit, the first light-emitting unit having an optical axis inclined with respect to an optical axis of the second light-emitting unit such that the optical axes are separated from each other in the shorter side direction, and the third light-emitting unit having an optical axis inclined with respect to an optical axis of the fourth light-emitting unit such that the optical axes are separated from each other in the shorter side direction, and the shorter side directions of the light beams from the third and fourth light-emitting units are the same as or orthogonal to the shorter side directions of the light beams from the first and second light-emitting units.”

The office action concedes that Korevaar does not disclose an incline on the optical axes such that the shorter side directions of the light beams from the third and fourth light-emitting units are the same as or orthogonal to the shorter side directions of the light beams from the first and second light-emitting units. [See 9/21/2006 Office Action at p. 7 (“Although

not expressly disclosing the claimed incline of the transmitter(s) by...”)]. However, the office action asserts that it would have been obvious to arrange the transmitters in this manner “to arrive at the stated goal of overlapping the laser beams in order to reduce signal fluctuations.” [9/21/2006 Office Action at p. 8]. The sections of Korevaar cited by the office action to support this conclusion are column 5, lines 22-30 and 32-34, and FIG. 4B. [9/21/2006 Office Action at pp. 7-8 & 10]. These sections of Korevaar are a portion of the specification and a drawing.

The portion of Korevaar’s specification cited is quoted and discussed *supra* at p. 13 in connection with claims 8, 10 and 14. The text does not mention (1) a shorter diameter direction and (2) an incline on the optical axes such that the shorter side directions of the light beams from the third and fourth light-emitting units are the same as or orthogonal to the shorter side directions of the light beams from the first and second light-emitting units.

The office action does not state that Korevaar’s FIG. 4B shows an inclination of light-emitting units such that the incline light-emitting units such that the short side directions of their emanating light beams are the same as or orthogonal to the shorter side directions of other emanating light beams. Instead, it states that Korevaar allows the laser transmitters controlled by gimbals to have different optical axis; thus, allowing one light beam to be orthogonal to the another light beam. [9/21/2006 Office Action at p. 10]. The figure cited by the office action is reproduced and discussed *supra* at p. 16 in connection with claims 11, 13 and 15. In discussing FIG. 4B, Korevaar does not mention (1) a shorter diameter direction or (2) the incline light-emitting units such that the short side directions of their emanating light beams are the same as or orthogonal to the shorter side directions of other emanating light beams.

Even though Korevaar does not mention either (1) a shorter diameter direction or (2) an incline on the optical axes such that the shorter side directions of the light beams from the

third and fourth light-emitting units are the same as or orthogonal to the shorter side directions of the light beams from the first and second light-emitting units, the office action states it would have been obvious be obvious to optimize these features. However, the office action does not cite any support for its claim.

As the office action concedes, to optimize a variable, it is necessary to appreciate that the variable is result effective. [9/21/2006 Office Action at p. 9 (“Only Result-Effective Variables Can Be Optimized”)]. Korevaar is utterly silent on (1) a shorter diameter direction or (2) the incline light-emitting units such that the short side directions of their emanating light beams are the same as or orthogonal to the shorter side directions of other emanating light beams. Hence, because Korevaar does not mention either of the variables, it would not have been obvious them. Therefore, Korevaar does not teach, disclose or suggest “the first light-emitting unit having an optical axis inclined with respect to an optical axis of the second light-emitting unit such that the optical axes are separated from each other in the shorter side direction, and the third light-emitting unit having an optical axis inclined with respect to an optical axis of the fourth light-emitting unit such that the optical axes are separated from each other in the shorter side direction, and the shorter side directions of the light beams from the third and fourth light-emitting units are the same as or orthogonal to the shorter side directions of the light beams from the first and second light-emitting units” as recited in Applicant’s claim 16.

Accordingly, at least independent claim 16 is respectfully asserted to be in condition for allowance. Applicant respectfully requests reconsideration and withdrawal of the rejection under § 103(a).

5. **Claims 18 and 19 are Patentably Distinct from Korevaar**

Applicant's claim 18 recites:

"18. An apparatus which transmits information by directing light beams through a free space, comprising:

a plurality of light-emitting units, each of the units having an optical axis and emitting a light beam which has a cross section having a shorter side direction, and the plurality of light-emitting units including a first light-emitting unit and a second light-emitting unit which emit light beams with the shorter side directions different from each other."

The office action concedes that Korevaar does not disclose a plurality of light-emitting units, each having an optical axis, and a plurality of light-emitting units, including a first and second light-emitting unit, emitting light beams with shorter side directions different from each other. [See 9/21/2006 Office Action at p. 7 ("Although not expressly disclosing the claimed incline of the transmitter(s) by...")]. However, the office action asserts that it would have been obvious to arrange the transmitters in this manner "to arrive at the stated goal of overlapping the laser beams in order to reduce signal fluctuations." [9/21/2006 Office Action at p. 8]. The sections of Korevaar cited by the office action to support this conclusion are column 5, lines 22-30 and 32-34, and FIG. 4B. [9/21/2006 Office Action at pp. 7-8 & 10]. These sections of Korevaar are a portion of the specification and a drawing.

The portion of Korevaar's specification cited is quoted and discussed *supra* at p. 13 in connection with claims 8, 10 and 14. The text does not mention (1) a shorter diameter direction and (2) a first and second light-emitting units that emit light beams with different shorter side directions from each other.

Additionally, office action does not state that Korevaar's FIG. 4B shows a plurality of light-emitting units, each having an optical axis, and a plurality of light-emitting

units, including a first and second light-emitting unit, emitting light beams with shorter side directions different from each other. Rather, it states that Korevaar allows the laser transmitters controlled by gimbals to be arrayed so that they have different optical axis; thus, allowing for a first and second light-emitting units that emit light beams with different shorter side directions from each other. [9/21/2006 Office Action at p. 10]. The figure cited by the office action is reproduced and discussed *supra* at p. 16 in connection with claims 11, 13 and 15. In discussing FIG. 4B, Korevaar does not mention (1) a shorter diameter direction or (2) a first and second light-emitting units that emit light beams with different shorter side directions from each other.

The office action concedes that, to optimize a variable, it is necessary to appreciate that the variable is result effective. [9/21/2006 Office Action at p. 9 (“Only Result-Effective Variables Can Be Optimized”)]. Because neither the text cited or FIG. 4B tie (1) a shorter diameter direction and (2) a first and second light-emitting units that emit light beams with different shorter side directions from each other to any result (including reduction in signal fluctuation), it cannot be obvious to optimize these variables. Thus, Korevaar does not teach, disclose or suggest “a plurality of light-emitting units, each of the units having an optical axis and emitting a light beam which has a cross section having a shorter side direction, and the plurality of light-emitting units including a first light-emitting unit and a second light-emitting unit which emit light beams with the shorter side directions different from each other” as recited Applicant’s claim 18.

Accordingly, at least independent claim 18 and its dependent claim 19 are respectfully asserted to be in condition for allowance. Applicant respectfully requests reconsideration and withdrawal of the rejections under Section 103(a).

Appl. No. 10/652,660
Paper dated December 12, 2006
Reply to Office Action dated September 21, 2006

Applicant has chosen in the interest of expediting prosecution of this patent application to distinguish the cited documents from the pending claims as set forth above. These statements should not be regarded in any way as admissions that the cited documents are, in fact, prior art. Finally, Applicant has not specifically addressed the rejections of the dependent claims. Applicant respectfully submits that the independent claims, from which they depend, are in condition for allowance as set forth above. Accordingly, the dependent claims also are in condition for allowance. Applicant, however, reserves the right to address such rejections of the dependent claims in the future as appropriate.

Appl. No. 10/652,660
Paper dated December 12, 2006
Reply to Office Action dated September 21, 2006

CONCLUSION


For the above-stated reasons, this application is respectfully asserted to be in condition for allowance. An early and favorable examination on the merits is requested. In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 13-4500, ORDER NO. 1232-5501.

Respectfully submitted,
MORGAN & FINNEGAN, L.L.P.

Dated: December 12, 2006

By: _____


Matthew K. Blackburn
Registration No. 47,428

Correspondence Address:
MORGAN & FINNEGAN, L.L.P.
3 World Financial Center
New York, NY 10281-2101
(212) 415-8700 Telephone
(212) 415-8701 Facsimile